

AK

Notice of Allowability	Application No.	Applicant(s)	
	10/616,586	ASPAR ET AL.	
	Examiner	Art Unit	
	William C. Vesperman	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/27/2004.
2. ☒ The allowed claim(s) is/are 1-22.
3. ☒ The drawings filed on 09 July 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>12/9/2003</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. This action is in reply to applicant's election of 12/27/2004.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Allan A. Fanucci on 3/4/2005.

3. Please replace Claim 1 with revised Claim 1 as shown below.

1. A method for fabricating a composite substrate which method comprises:

- forming a recess in a front face of at least one of a support substrate or a source substrate that extends to a zone of weakness, the recess having a configuration that, in conjunction with the zone of weakness, assists in defining a transfer layer in the source substrate;

- depositing a bonding material onto at least one of the front face of the source substrate or the front face of the support substrate;

- bonding the front faces of the source and support substrates together in a manner to provide at least some of the bonding material in the recess; and

Art Unit: 2813

mechanically or thermally detaching the transfer layer from the source substrate along the zone of weakness to form a composite substrate comprising the transfer layer, bonding material and the support substrate.

- 4. Please cancel Claims 23 – 25.

Allowed Subject Matter

5. Claims 1 – 22 are allowed.

6. The following is an examiner's statement for reasons for allowance.

Borenstein (US 6,673,694 B2) teaches forming a recess in a front face of at least one of a support substrate or a source substrate, depositing a bonding material onto at least one of the front face of the source substrate or the front face of the support substrate; bonding the front faces of the source and support substrates together in a manner to provide at least some of the bonding material in the recess; and removing the wafer and oxide layers using by chemical etching, in order to form a composite substrate comprising the transfer layer, bonding material and the support substrate.

The prior art does not teach or suggest in combination with the other claimed limitations, forming a recess in a front face of at least one of a support substrate or a source substrate that extends to a zone of weakness, the recess having a configuration that, in conjunction with the zone of weakness, assists in defining a transfer layer in the source substrate; and mechanically or thermally detaching the transfer layer from the source substrate along the zone of

Art Unit: 2813

weakness to form a composite substrate comprising the transfer layer, bonding material and the support substrate.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Doyle (US 6,727,549) teaches a method of fabricating layers to a substrate.

Berstetein et al. (US 6,548,338) teaches an integrated semiconductor device.

Sakaguchi et al. (US 6,100,166) teaches a process for forming semiconductor composites.

Bruel (5,374,564) teaches a process for forming thin semiconductor films.

Yamauchi et al. (US 6,534,380) teaches the formation of a semiconductor substrate.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Vesperman whose telephone number is 571-272-1701. The examiner can normally be reached on Mon. - Fri., 8:00 - 4:30.

Art Unit: 2813

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl White, Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WCV
WCV

Art Unit 2813

March 4, 2005

Craig A. Thompson
CRAIG A. THOMPSON
PRIMARY EXAMINER